ASYNCHRONOUS TRANSFER MODE TRAFFIC SHAPERS

ABSTRACT OF THE INVENTION

The invention relates, in one embodiment, a computer-implemented method for shaping the output of cells on an output path of a data transmitting device. The data transmitting device is configured for switching the cells from a plurality of input paths to the output path to a network. In one embodiment the method includes sorting a plurality of queues, each queue including a plurality of cells associated with a communication device. The plurality of queues are arranged according to a weight and a data rate associated with each plurality of cells resulting in a plurality of sorted queues of queues. An aggregate output of cells from each sorted queue of queues is regulated based upon the data rates of the queues of the each sorted queue of queues. And, the output of the aggregate output of cells from each sorted queue of queues is regulated based upon the weights of the each sorted queue of queues, such that the scheduled output is coupled to the output path. The scheduled output conforms to a plurality of characteristics of the network, such that the network is efficiently used to carry the cells from the plurality of input paths to a plurality of communication devices. Thereby, apparatuses and methods of traffic shaping are disclosed herein.